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State of Utah
DEPARTMENT OF NATURAL RESOURCES
Division of Oil, Gas & Mining

MICHAEL R. STYLER
Executive Director
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Division Director

Inspection Report
Minerals Regulatory Program
April 27, 2011

Reviewed:

Mine Name: ML 27618	**Permit Number**: S/025/0025
Operator Name: Loy Crapo	**Inspection Date**: April 19, 2011
Inspector(s): Peter Brinton, Lynn Kunzler	**Time**: 2:00pm – 2:45pm
Other Participants: Loy Crapo, James Holland (BLM-Kanab)	**Mine Status**: Active

Elements of Inspection	Evaluated	Comment	Enforcement
1. Permits, Revisions, Transfer, Bonds	☒	☒	☐
2. Public Safety (shafts, adits, trash, signs, highwalls)	☒	☒	☐
3. Protection of Drainages / Erosion Control	☒	☒	☐
4. Deleterious Material	☐	☐	☐
5. Roads (maintenance, surfacing, dust control, safety)	☐	☐	☐
6. Reclamation	☒	☒	☐
7. Backfilling/Grading (trenches, pits, roads, highwalls, shafts, drill holes)	☒	☒	☐
8. Soils	☐	☐	☐
9. Revegetation	☒	☒	☐
10. Other	☐	☐	☐

Permit fee: Current **Bond Renewal Date:** 07/03/2009 **Bond Amount:** $8,900

Purpose of Inspection: To document site conditions in order to evaluate a bond release request

Inspection Summary:

Mr. Crapo, Mr. Holland (BLM), Lynn Kunzler, and I inspected the site to evaluate reclamation earthwork and revegetation in the 2.16 acre plot of Trail Canyon area of the permit. Photos and slope angle measurements were taken to document site conditions.

Some of the overburden placed just west of the pits on the Trail Canyon slope has been pushed to mostly backfill the pits, leaving slight depressions adjacent to the remaining pit highwalls (estimated to be about 30 ft high). Some erosion of less-competent highwall material has occurred, resulting in a generally more stable condition. While additional erosion of the highwalls is expected, the highwalls do not presently pose any significant threat to public safety beyond that of the natural surroundings, and their form matches that of the surrounding landscape.

The area has received large amounts of precipitation, and a large part of the overburden dump has slumped down the canyon slope between fall 2010 and spring 2011. From crest to toe, overburden slope length down into the canyon was estimated to be about 150 feet, and the slope angle was between 30 and 38 degrees (measured using a clinometer). It is roughly estimated that the slump, about 100 feet along the contour and roughly 85 feet high or more, has dropped (on multiple failure surfaces) at least 15 to 20 feet vertically.

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We also observed cracks (apparently fresh) at least 10 ft or so back away from the existing crest, an indication that the slopes may still be unstable, and may continue to slump with time and additional precipitation and without remediation. Tension cracks were also observed to the north and south of the active slump on areas that have not slumped, as well as in some reclaimed and revegetated areas to the south, and slumping in these areas may also occur over time.

The depressions over the pits have been holding significant rainwater which originates above the highwall, and large amounts of storm water and snowmelt have flowed out of the depressions, resulting in a gully (up to about 10 ft deep) down the overburden slope. As a result, areas below the gully have received a lot sedimentation. Erosion will continue until the channel is stabilized. Some plants are growing on sediment deposited at the base of the slope in the gully.

Other recontouring of overburden between the active slump and the pit location is acceptable. Seeding of existing recontoured areas had apparently not yet occurred for the 2.16 acres inspected, and Russian thistle is the only plant observed to grow in the recontoured areas to date. Undisturbed trees and other vegetation are growing immediately above the existing highwall.

In a post-inspection phone call on May 10th, Mr. Crapo indicated that he wants to do reclamation work this year by either using a small piece of equipment to do it himself, or by hiring local contractors to recontour and reseed (with a seed drill), which has been successful before. Recontouring, if acceptable, will free up bond to apply to an area proposed for future mining about a mile away (ML 51615).

Conclusions and Recommendations (Preliminary):

The current bond amount on this permit ($8,900) is likely too small to justify a bond release or re-allocation at this time, as significant reclamation earthwork is still needed. It is recommended that the reclamation bond not be released or re-allocated until the following reclamation occurs:

1) The angle of the overburden slope is decreased to a stable configuration in the slump area and in other adjacent areas where evidence of slumping is expected to occur in the future,
2) The erosion channel is stabilized, or some other acceptable water diversion plan is implemented to manage runoff and minimize future erosion, and
3) Revegetation has been established on recontoured areas.

The highwalls appear to be mostly stabilized and blend in with the natural landscape. It is expected that they will be acceptable without additional work, and their stability can be re-evaluated in a future inspection. While the slumping overburden piles could be easily pushed down the slope, it is possible that some overburden may need to be pulled up the slope and placed against the highwall in order to achieve a stable and reseedable grade, and to avoid disturbing adjacent BLM land below the slump.

These are preliminary conclusions and recommendations. Other conclusions and recommendations resulting from a future inspection might be given in the future. I will try work with Mr. Crapo to achieve acceptable reclamation.

Inspector's Signature Peter Smith

PNB: lk: pbb
cc: Loy Crapo
Will Stokes, SITLA
James Holland, BLM
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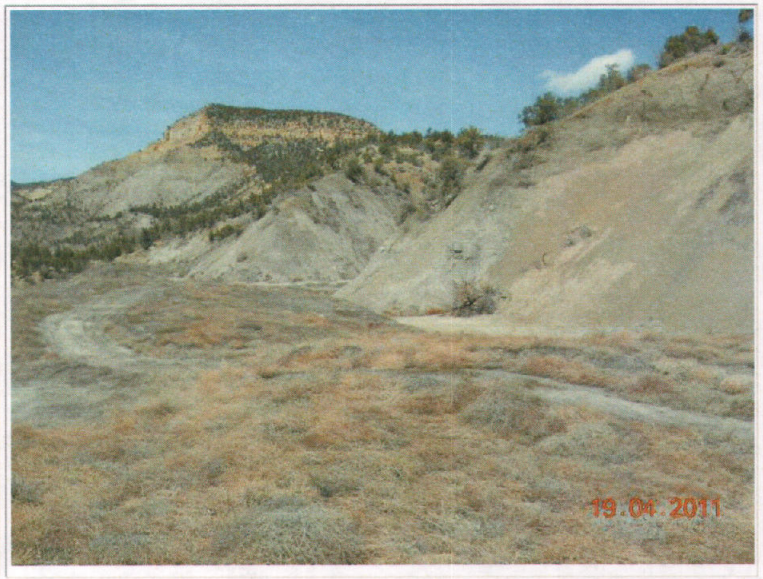
Note the ponded water below the highwall and the top of the drainage channel running through the overburden to the lower left.

Side view of the slumping overburden and the gully running from the left down towards the bottom center of the photo. For scale, note the persons in the photo.

Additional tension cracks on the overburden slope.

Eroding channel on the slope and sedimentation below it.

Sediment below the gully in the slump (note the vegetation on the sediment).



The highwalls blend in with the surroundings, and appear to be stabilizing.